Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1 to 8. (Canceled)

Claims 9-11. (Withdrawn)

Claim 12. (Canceled)

Claim 13. (Currently Amended) A method of manufacturing a dopant-free single crystal of silicon carbide, comprising:

forming a single crystal of silicon carbide on a substrate surface at a temperature of not less than 900° C from an atmosphere containing a silicon carbide feedstock gas ~~comprising at least~~ consisting of a silicon source gas and a carbon source gas under the atmospheric condition of the partial pressure (ps) of the silicon source gas being held constant (at ps>0) and the partial pressure of the carbon source gas in the atmosphere repeatedly alternating between state pc1 present at an interval of time (tc1) and the state pc2 present at an interval of time (tc2) until the single crystal of silicon carbide is completely formed, where pc1>pc2 such that the partial pressure ratio (pc1/ps) falls within the range of 1-10 times the attachment coefficient ratio (Ss/Sc) and the partial pressure ratio (pc2/ps) falls within the range of less than ~~once~~ one time the attachment coefficient ratio (Ss/Sc), wherein Ss denotes the attachment coefficient of silicon source gas to the silicon carbide substrate at the substrate temperature during formation of said silicon carbide and Sc denotes the attachment coefficient of carbon source gas to the silicon

carbide substrate at the substrate temperature during the formation of said single crystal of silicon carbide.

Claim 14. (Previously Presented) The method of manufacture according to Claim 13, wherein the silicon carbide is at least one member selected from the group consisting of SiH_4, Si_2H_6, $SiCl_4$, $SiHCl_3$, SiH_2Cl_2, $Si(CH_3)_4$, $SiH_2(CH_3)_2$, $SiH(CH_3)_3$ and $Si_2(CH_3)_6$ and said carbon source gas is at least one member selected from the group consisting of CH_4, C_3H_8, C_2H_2, C_2H_6, C_2H_4,C_3H_6, CCl_4, CHF_3 and CF_4.

Claim 15. (Previously Presented) The method of manufacture according to Claim 13, wherein pc2 is essentially zero, the time interval(tc1) during which the partial pressure of the carbon source gas is set to pc1 is 0.1-30 seconds, and the time interval(tc2) during which the partial pressure of the carbon source gas is set to pc2 is 0.1-30 seconds.

Claim 16. (Previously Presented) A method of manufacturing silicon carbide, comprising:

forming a seed crystal of silicon carbide by the method of Claim 13; and

depositing silicon carbide on said seed crystal by vapor phase epitaxy, sublimation recrystallization or liquid deposition.

Claim 17. (Previously Presented) The method of manufacture according to Claim 16, wherein silicon carbide blocks of 4-6 inch bore are formed by vapor phase epitaxy, sublimation recrystallization or liquid deposition.

Claim 18. (Previously Presented) A method of manufacturing composite materials, comprising:

forming a seed crystal of silicon carbide by the method of Claim 13; and

forming diamond and/or a gallium nitride structure on the seed crystal.

Claim 19. (Currently Amended) A method of manufacturing a dopant-free single crystal of silicon carbide, comprising:

forming a single crystal of silicon carbide on a substrate surface at a temperature of not less than 900° C from an atmosphere containing a silicon carbide feedstock gas ~~comprising at least~~ consisting of a silicon source gas and a carbon source gas under the atmospheric condition of the partial pressure (pc) of the carbon source gas being held constant (at pc>0) and the partial pressure of the silicon source gas in the atmosphere repeatedly alternating between state ps1 present at an interval of time (ts1) and the state ps2 present at an interval of time (ts2) until the single crystal of silicon carbide is completely formed, where ps1<ps2 such that the partial pressure ratio (pc/ps1) falls within the range of 1-10 times the attachment coefficient ratio (Ss/Sc) and the partial pressure ratio (pc/ps2) falls within the range of less than ~~once~~ one time the attachment coefficient ratio (Ss/Sc), wherein Ss denotes the attachment coefficient of silicon source gas to the silicon carbide substrate at the substrate temperature during formation of said silicon carbide and Sc denotes the attachment coefficient of carbon source gas to the silicon carbide substrate at the substrate temperature during the formation of said single crystal of silicon carbide.

Claim 20. (Previously Presented) The method of manufacture according to Claim 19, wherein the silicon carbide is at least one member selected from the group consisting of SiH_4, Si_2H_6, $SiCl_4$, $SiHCl_3$, SiH_2Cl_2, $Si(CH_3)_4$, $SiH_2(CH_3)_2$, $SiH(CH_3)_3$ and $Si_2(CH_3)_6$ and said carbon source gas is at least one member selected from the group consisting of CH_4, C_3H_8, C_2H_2, C_2H_6, C_2H_4, C_3H_6, CCl_4, CHF_3 and CF_4.

Claim 21. (Previously Presented) The method of manufacture according to Claim 19, wherein ps1 is essentially zero, the time interval(ts1) during which the partial pressure of the silicon source gas is set to ps1 is 0.1-60 seconds, and the time interval(ts2) during which the partial pressure of the carbon source gas is set to ps2 is 0.1-60 seconds.

Claim 22. (Previously Presented) A method of manufacturing silicon carbide, comprising:

forming a seed crystal of silicon carbide by the method of Claim 19; and

depositing silicon carbide on said seed crystal by vapor phase epitaxy, sublimation recrystallization or liquid deposition.

Claim 23. (Previously Presented) The method of manufacture according to Claim 22, wherein silicon carbide blocks of 4-6 inch bore are formed by vapor phase epitaxy, sublimation recrystallization or liquid deposition.

Claim 24. (Previously Presented) A method of manufacturing composite materials, comprising:

forming a seed crystal of silicon carbide by the method of Claim 19; and

forming diamond and/or a gallium nitride structure on the seed crystal.

Claim 25, (New) The method of manufacture according to Claim 13, wherein the method of deposition is a CVD or ALE method.

Claim 26. (New) The method of manufacture according to Claim 19, wherein the method of deposition is a CVD or ALE method.